

**Amendments to the Claims:**

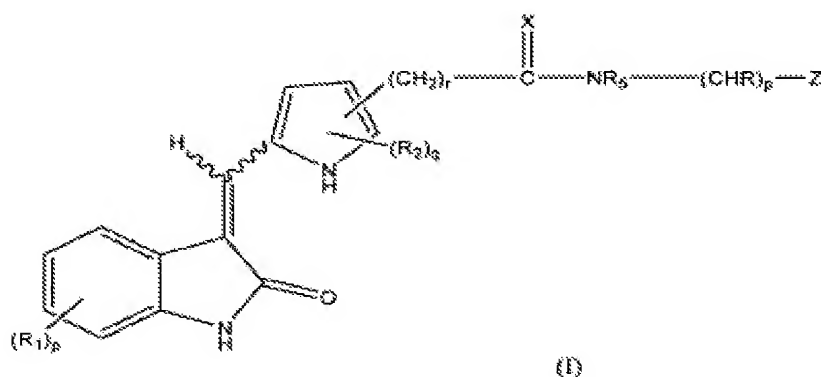
This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1-14 (Canceled)

15. (Currently amended) A method of inhibiting phosphorylation of CSF1R (colony stimulating factor 1 receptor) in a patient in need of such inhibition, comprising administering to said patient an inhibitory amount of a compound of

Formula I:



wherein

R is independently H, OH, alkyl, aryl, cycloalkyl, heteroaryl, alkoxy, heterocyclic and amino;

each  $R_1$  is independently selected from the group consisting of alkyl, halo, aryl, alkoxy, haloalkyl, haloalkoxy, cycloalkyl, heteroaryl, heterocyclic, hydroxy,  $-C(O)-R_8$ ,  $-NR_9R_{10}$ ,  $-NR_9C(O)-R_{12}$  and  $-C(O)NR_9R_{10}$ ;

each  $R_2$  is independently selected from the group consisting of alkyl, aryl, heteroaryl,  $-C(O)-R_8$  and  $SO_2R''$ , where  $R''$  is alkyl, aryl, heteroaryl,  $NR_9N_{10}$  or alkoxy;

each  $R_5$  is independently selected from the group consisting of hydrogen, alkyl, aryl, haloalkyl, cycloalkyl, heteroaryl, heterocyclic, hydroxy,  $-C(O)-R_8$  and  $(CHR)_rR_{11}$ ;

X is O or S;

p is 0-3;

q is 0-2;

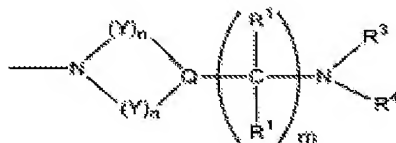
r is 0-3;

$R_8$  is selected from the group consisting of  $-OH$ , alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

$R_9$  and  $R_{10}$  are independently selected from the group consisting of H, alkyl, aryl, aminoalkyl, heteroaryl, cycloalkyl and heterocyclic, or  $R_9$  and  $R_{10}$  together with N may form a ring, where the ring atoms are selected from the group consisting of C, N, O and S;

$R_{11}$  is selected from the group consisting of  $-OH$ , amino, monosubstituted amino, disubstituted amino, alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic  $R_{12}$  is selected from the group consisting of alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

$Z$  is  $OH$ ,  $O$ -alkyl, or  $-NR_3R_4$ , where  $R_3$  and  $R_4$  are independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, cycloalkyl, and heterocyclic, or  $R_3$  and  $R_4$  may combine with  $N$  to form a ring where the ring atoms are selected from the group consisting of  $CH_2$ ,  $N$ ,  $O$  and  $S$  or



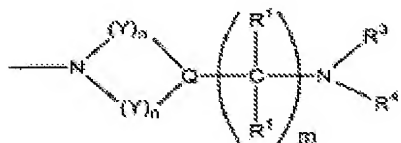
wherein  $Y$  is independently  $CH_2$ ,  $O$ ,  $N$  or  $S$ ,

$Q$  is  $C$  or  $N$

$n$  is independently 0-4; and

$m$  is 0-3.

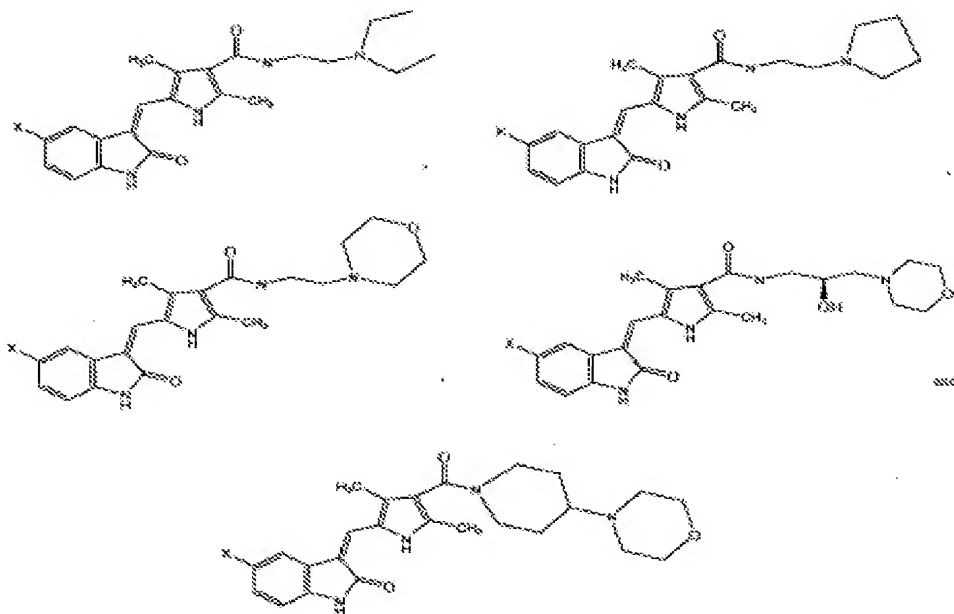
16. (New) The method of claim 15, wherein  $R_1$  is halo and  $p$  is 1.
17. (New) The method of claim 16, where  $Z$  is  $-NR_3R_4$ , wherein  $R_3$  and  $R_4$  form a morpholine ring.
18. (New) The method of claim 15, wherein  $Z$  is:



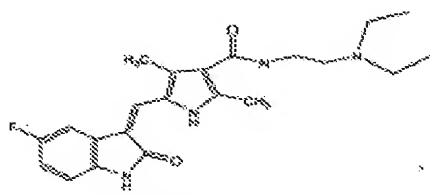
wherein each  $Y$  is  $CH_2$ , each  $n$  is 2,  $m$  is 0 and  $R_3$  and  $R_4$  form a morpholine ring.

19. (New) The method of claim 15, wherein  $R_2$  is methyl,  $q$  is 2 and the methyls are bonded at the 3 and 5 positions.
20. (New) The method of claim 15, where in  $r$  is 0.
21. (New) The method of claim 20, wherein  $R_5$  is  $H$ .
22. (New) The method of claim 20, wherein  $R_2$  is methyl,  $q$  is 2 and the methyls are bonded at the 3 and 5 positions.

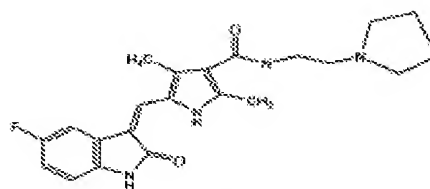
23. (New) The method of claim 15, wherein the compound administered is selected from the group consisting of:



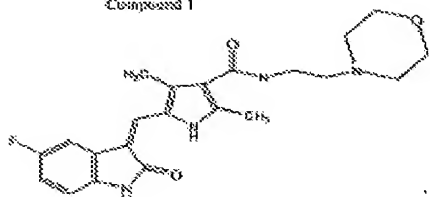
24. (New) The method of claim 15, wherein the compound of Formula I is selected from the group consisting of:



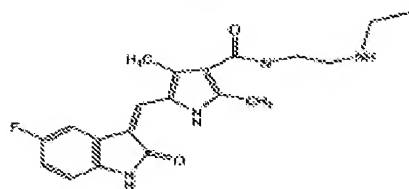
Compound 1



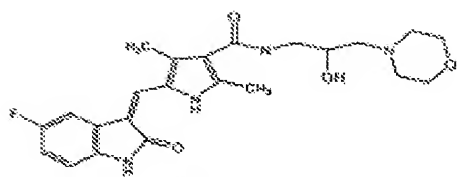
Compound 2



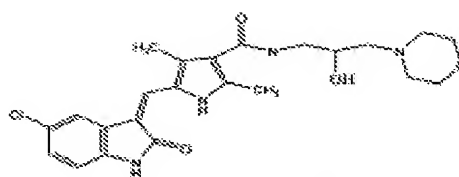
Compound 3



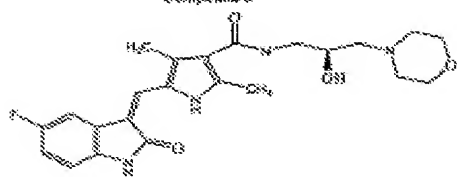
Compound 4



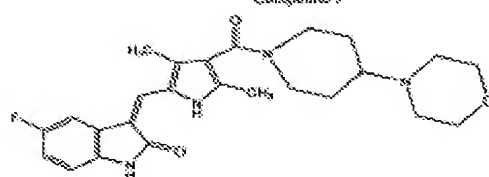
Compound 5



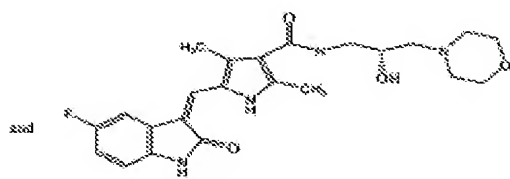
Compound 6



Compound 7



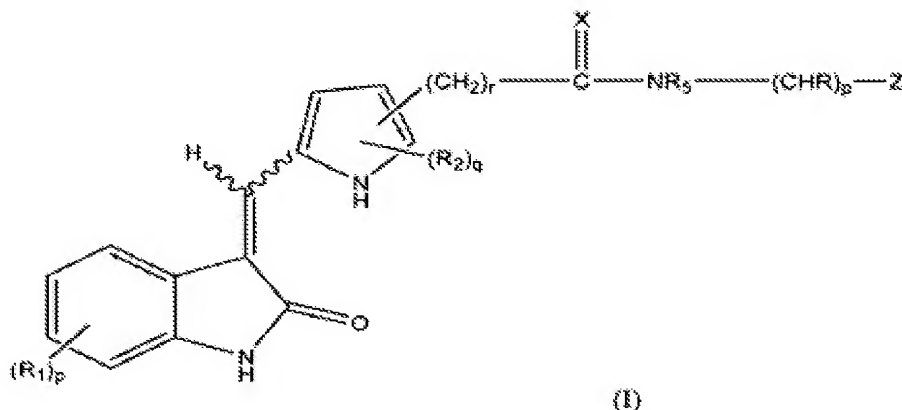
Compound 8



Compound 9

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25. (New) A method for treating excessive osteolysis in a patient having cancer that has metastasized to bone, comprising administering to said patient an effective amount of a compound of Formula I:



wherein

R is independently H, OH, alkyl, aryl, cycloalkyl, heteroaryl, alkoxy, heterocyclic and amino;  
 each  $R_1$  is independently selected from the group consisting of alkyl, halo, aryl, alkoxy, haloalkyl, haloalkoxy, cycloalkyl, heteroaryl, heterocyclic, hydroxy,  $-C(O)-R_8$ ,  $-NR_9R_{10}$ ,  $-NR_9C(O)-R_{12}$  and  $-C(O)NR_9R_{10}$ ;

each  $R_2$  is independently selected from the group consisting of alkyl, aryl, heteroaryl,  $-C(O)-R_8$  and  $SO_2R''$ , where  $R''$  is alkyl, aryl, heteroaryl,  $NR_9R_{10}$  or alkoxy;

each  $R_5$  is independently selected from the group consisting of hydrogen, alkyl, aryl, haloalkyl, cycloalkyl, heteroaryl, heterocyclic, hydroxy,  $-C(O)-R_8$  and  $(CHR)_{r11}$ ;

X is O or S;

p is 0-3;

q is 0-2;

r is 0-3;

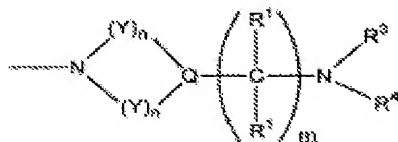
$R_8$  is selected from the group consisting of  $-OH$ , alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

$R_9$  and  $R_{10}$  are independently selected from the group consisting of H, alkyl, aryl, aminoalkyl, heteroaryl, cycloalkyl and heterocyclic, or  $R_9$  and  $R_{10}$  together with N may form a ring, where the ring atoms are selected from the group consisting of C, N, O and S;

$R_{11}$  is selected from the group consisting of  $-OH$ , amino, monosubstituted amino, disubstituted amino, alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;  $R_{12}$  is selected from the group consisting of alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

$R_{12}$  is selected from the group consisting of alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

Z is OH, O-alkyl, or  $-NR_3R_4$ , where  $R_3$  and  $R_4$  are independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, cycloalkyl, and heterocyclic, or  $R_3$  and  $R_4$  may combine with N to form a ring where the ring atoms are selected from the group consisting of  $CH_2$ , N, O and S or



wherein Y is independently  $CH_2$ , O, N or S,

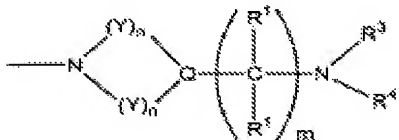
Q is C or N;

n is independently 0-4; and

m is 0-3;

or a salt thereof.

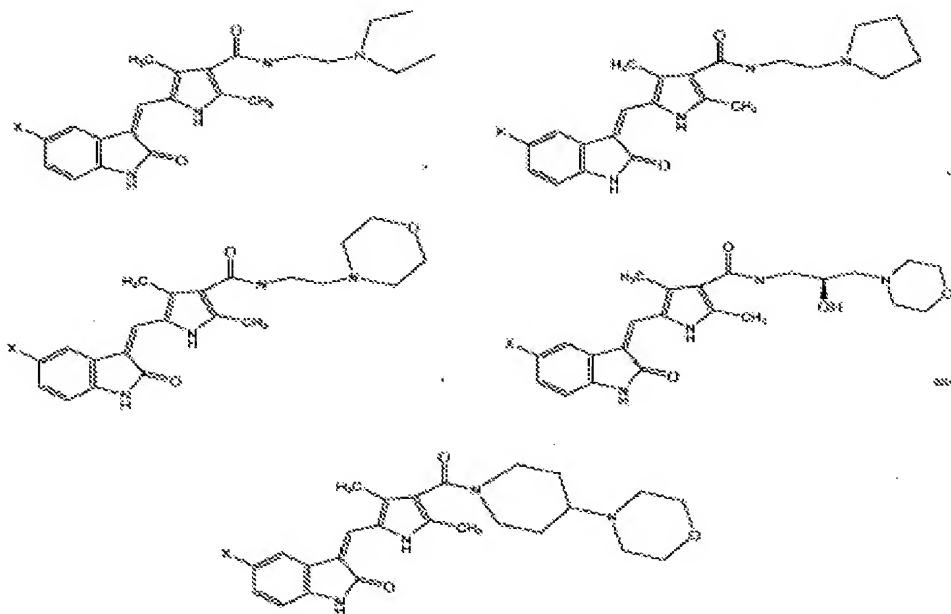
26. (New) The method of claim 25, wherein  $R_1$  is halo and p is 1.
27. (New) The method of claim 26, where Z is  $-NR_3R_4$ , wherein  $R_3$  and  $R_4$  form a morpholine ring.
28. (New) The method of claim 25, wherein Z is:



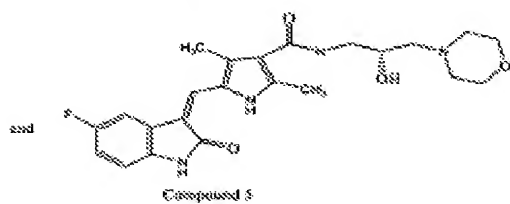
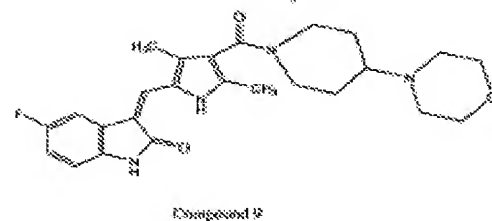
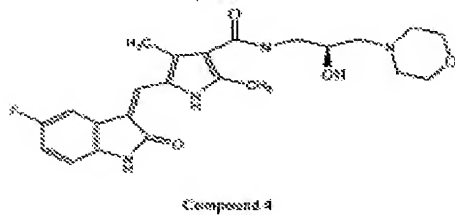
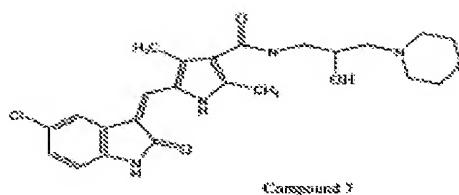
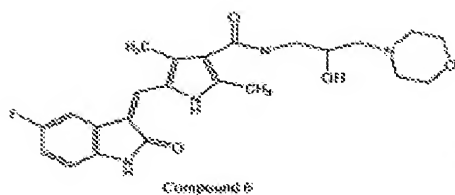
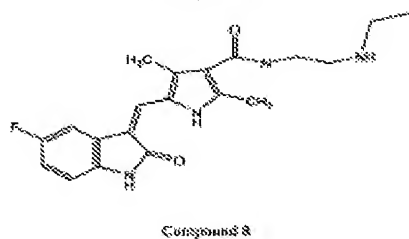
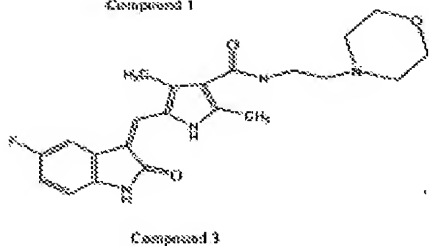
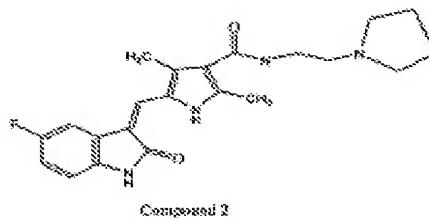
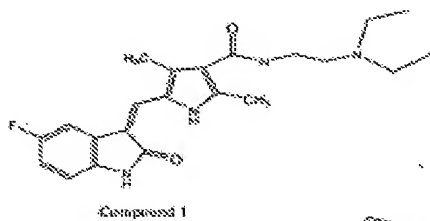
wherein each Y is  $CH_2$ , each n is 2, m is 0 and  $R_3$  and  $R_4$  form a morpholine ring.

29. (New) The method of claim 25, wherein  $R_2$  is methyl, q is 2 and the methyls are bonded at the 3 and 5 positions.
30. (New) The method of claim 25, where in r is 0.
31. (New) The method of claim 30, wherein  $R_5$  is H.
32. (New) The method of claim 30, wherein  $R_2$  is methyl, q is 2 and the methyls are bonded at the 3 and 5 positions.

33. (New) The method of claim 25, wherein the compound administered is selected from the group consisting of:

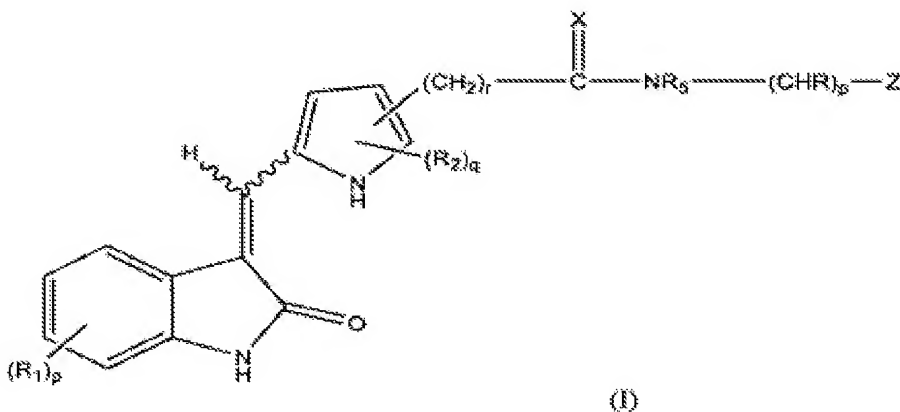


34. (New) The method of claim 25, wherein the compound of Formula I is selected from the group consisting of:





35. (New) A method for treating excessive osteolysis in a patient that has osteoporosis, comprising administering to said patient an effective amount of a compound of Formula I:



wherein

R is independently H, OH, alkyl, aryl, cycloalkyl, heteroaryl, alkoxy, heterocyclic and amino;  
each  $R_1$  is independently selected from the group consisting of alkyl, halo, aryl, alkoxy, haloalkyl, haloalkoxy, cycloalkyl, heteroaryl, heterocyclic, hydroxy,  $-C(O)-R_8$ ,  $-NR_9R_{10}$ ,  $-NR_9C(O)-R_{12}$  and  $-C(O)NR_9R_{10}$ ;

each  $R_2$  is independently selected from the group consisting of alkyl, aryl, heteroaryl,  $-C(O)-R_8$  and  $SO_2R''$ , where  $R''$  is alkyl, aryl, heteroaryl,  $NR_9N_{10}$  or alkoxy;

each  $R_5$  is independently selected from the group consisting of hydrogen, alkyl, aryl, haloalkyl, cycloalkyl, heteroaryl, heterocyclic, hydroxy,  $-C(O)-R_8$  and  $(CHR)_rR_{11}$ ;

X is O or S;

p is 0-3;

q is 0-2;

r is 0-3;

$R_8$  is selected from the group consisting of  $-OH$ , alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

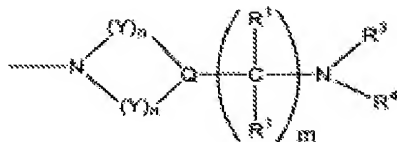
$R_9$  and  $R_{10}$  are independently selected from the group consisting of H, alkyl, aryl, aminoalkyl, heteroaryl, cycloalkyl and heterocyclic, or  $R_9$  and  $R_{10}$  together with N may form a ring, where the ring atoms are selected from the group consisting of C, N, O and S;

$R_{11}$  is selected from the group consisting of  $-OH$ , amino, monosubstituted amino, disubstituted amino, alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;  $R_{12}$  is selected from the group consisting of alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

$R_{12}$  is selected from the group consisting of alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

Z is OH, O-alkyl, or  $-NR_3R_4$ , where  $R_3$  and  $R_4$  are independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, cycloalkyl, and heterocyclic, or  $R_3$  and  $R_4$  may

combine with N to form a ring where the ring atoms are selected from the group consisting of CH<sub>2</sub>, N, O and S or



wherein Y is independently CH<sub>2</sub>, O, N or S,

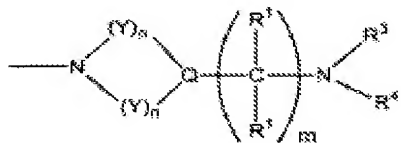
Q is C or N;

n is independently 0-4; and

m is 0-3;

or a salt thereof.

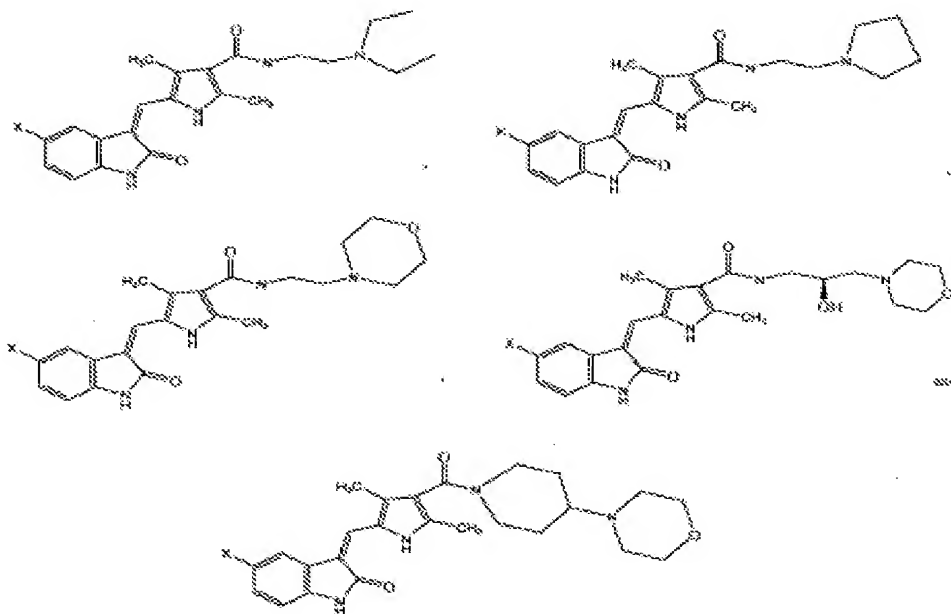
36. (New) The method of claim 35, wherein R<sub>1</sub> is halo and p is 1.
37. (New) The method of claim 36, where Z is -NR<sub>3</sub>R<sub>4</sub>, wherein R<sub>3</sub> and R<sub>4</sub> form a morpholine ring.
38. (New) The method of claim 35, wherein Z is:



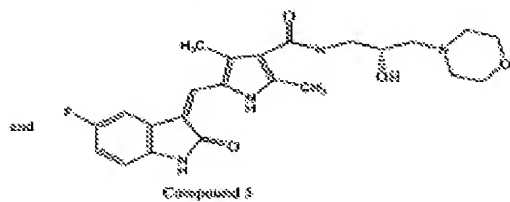
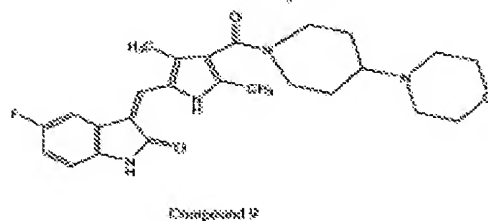
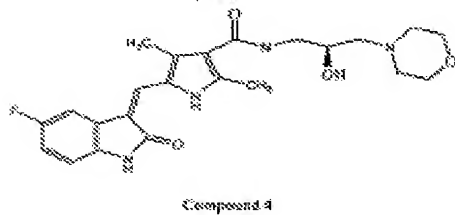
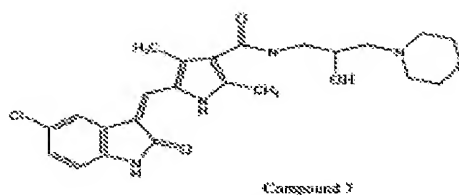
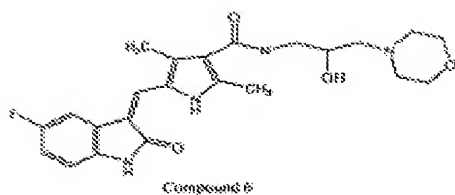
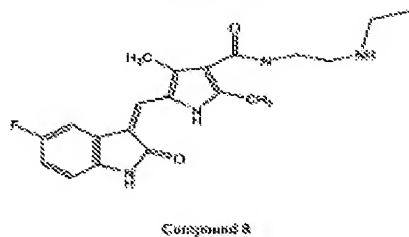
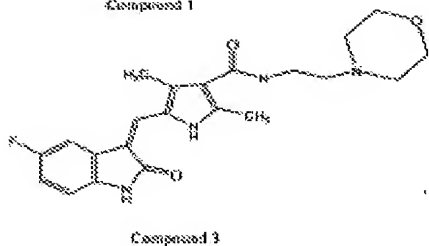
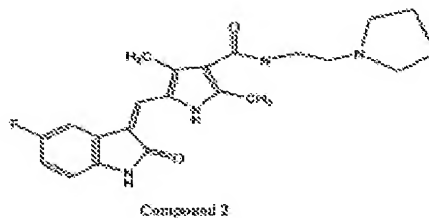
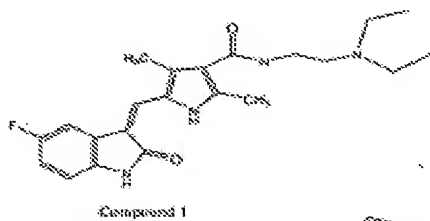
wherein each Y is CH<sub>2</sub>, each n is 2, m is 0 and R<sub>3</sub> and R<sub>4</sub> form a morpholine ring.

39. (New) The method of claims 35, wherein R<sub>2</sub> is methyl, q is 2 and the methyls are bonded at the 3 and 5 positions.
40. (New) The method of claim 35, where in r is 0.
41. (New) The method of claim 40, wherein R<sub>5</sub> is H.
42. (New) The method of claim 40, wherein R<sub>2</sub> is methyl, q is 2 and the methyls are bonded at the 3 and 5 positions.

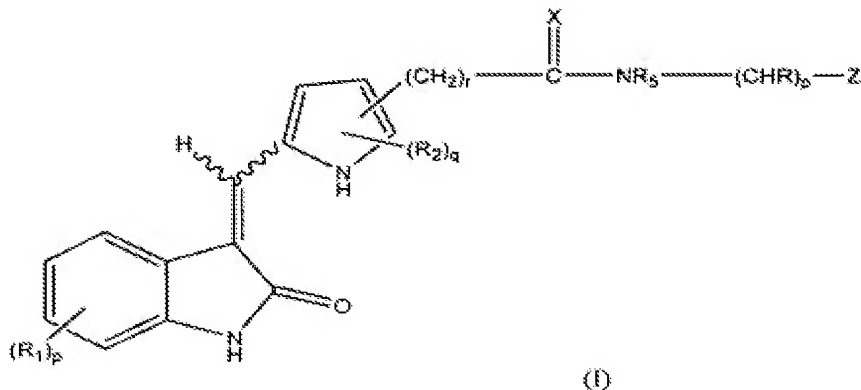
43. (New) The method of claim 35, wherein the compound administered is selected from the group consisting of:



44. (New) The method of claim 35, wherein the compound of Formula I is selected from the group consisting of:



45. (New) A method for treating excessive osteolysis in a patient having cancer that secretes M-CSF (Macrophage Colony Stimulating Factor), comprising administering to said patient an effective amount of a compound of Formula I:



wherein

R is independently H, OH, alkyl, aryl, cycloalkyl, heteroaryl, alkoxy, heterocyclic and amino;  
 each  $R_1$  is independently selected from the group consisting of alkyl, halo, aryl, alkoxy, haloalkyl, haloalkoxy, cycloalkyl, heteroaryl, heterocyclic, hydroxy,  $-C(O)-R_8$ ,  $-NR_9R_{10}$ ,  $-NR_9C(O)-R_{12}$  and  $-C(O)NR_9R_{10}$ ;

each  $R_2$  is independently selected from the group consisting of alkyl, aryl, heteroaryl,  $-C(O)-R_8$  and  $SO_2R''$ , where  $R''$  is alkyl, aryl, heteroaryl,  $NR_9R_{10}$  or alkoxy;

each  $R_5$  is independently selected from the group consisting of hydrogen, alkyl, aryl, haloalkyl, cycloalkyl, heteroaryl, heterocyclic, hydroxy,  $-C(O)-R_8$  and  $(CHR)_rR_{11}$ ;

X is O or S;

p is 0-3;

q is 0-2;

r is 0-3;

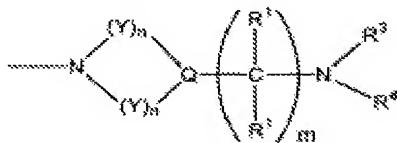
$R_8$  is selected from the group consisting of  $-OH$ , alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

$R_9$  and  $R_{10}$  are independently selected from the group consisting of H, alkyl, aryl, aminoalkyl, heteroaryl, cycloalkyl and heterocyclic, or  $R_9$  and  $R_{10}$  together with N may form a ring, where the ring atoms are selected from the group consisting of C, N, O and S;

$R_{11}$  is selected from the group consisting of  $-OH$ , amino, monosubstituted amino, disubstituted amino, alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;  $R_{12}$  is selected from the group consisting of alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

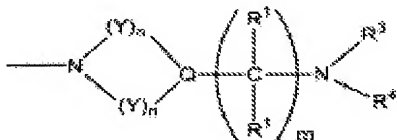
$R_{13}$  is selected from the group consisting of alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

Z is OH, O-alkyl, or  $\text{-NR}_3\text{R}_4$ , where  $\text{R}_3$  and  $\text{R}_4$  are independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, cycloalkyl, and heterocyclic, or  $\text{R}_3$  and  $\text{R}_4$  may combine with N to form a ring where the ring atoms are selected from the group consisting of  $\text{CH}_2$ , N, O and S or



wherein Y is independently  $\text{CH}_2$ , O, N or S,  
 Q is C or N;  
 n is independently 0-4; and  
 m is 0-3;  
 or a salt thereof.

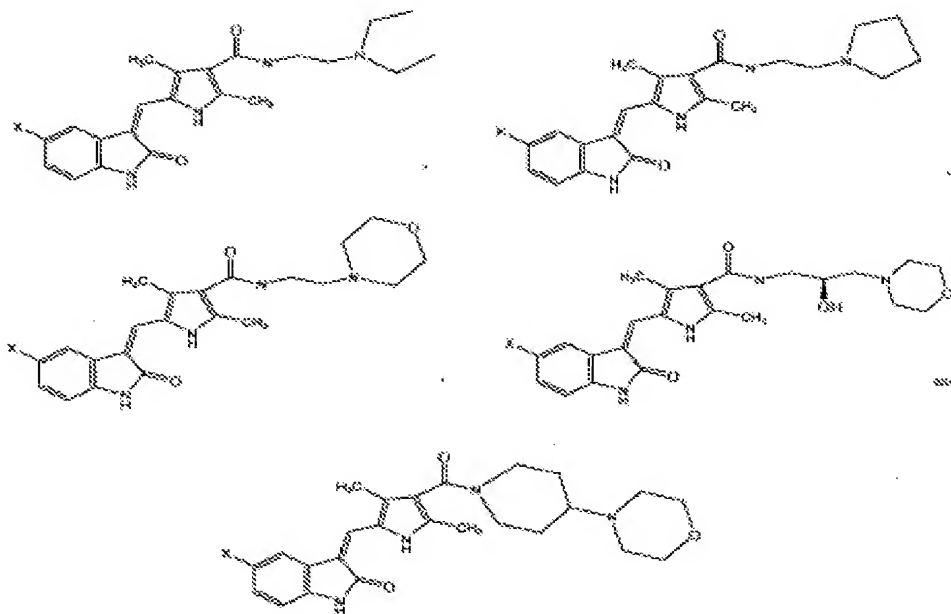
46. (New) The method of claim 45, wherein  $\text{R}_1$  is halo and p is 1.
47. (New) The method of claim 46, where Z is  $\text{-NR}_3\text{R}_4$ , wherein  $\text{R}_3$  and  $\text{R}_4$  form a morpholine ring.
48. (New) The method of claim 45, wherein Z is:



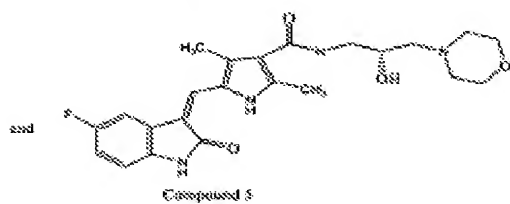
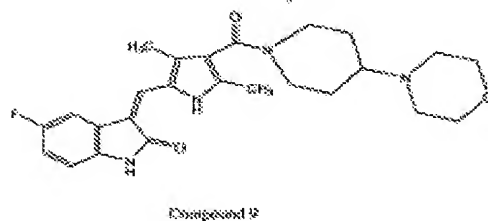
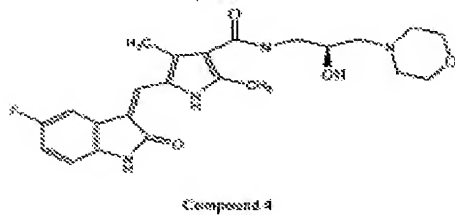
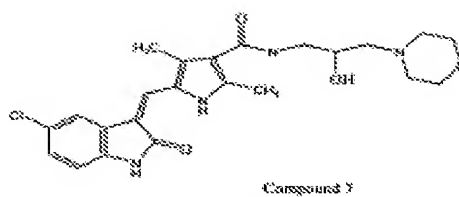
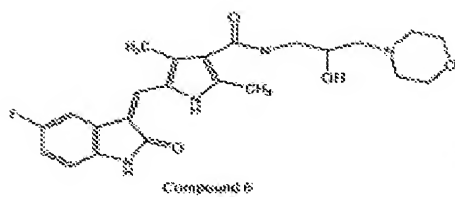
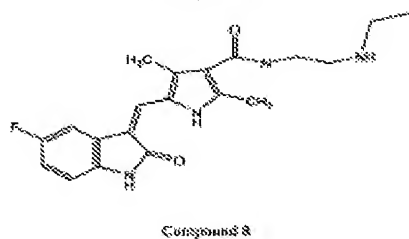
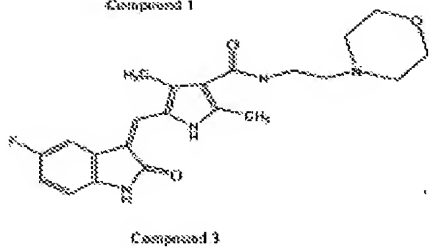
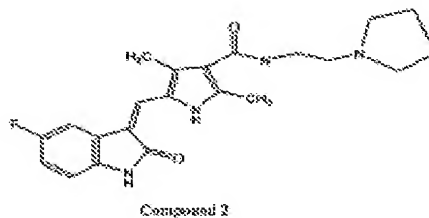
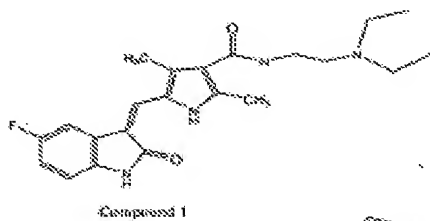
wherein each Y is  $\text{CH}_2$ , each n is 2, m is 0 and  $\text{R}_3$  and  $\text{R}_4$  form a morpholine ring.

49. (New) The method of claim 45, wherein  $\text{R}_2$  is methyl, q is 2 and the methyls are bonded at the 3 and 5 positions.
50. (New) The method of claim 45, where in r is 0.
51. (New) The method of claim 50, wherein  $\text{R}_5$  is H.
52. (New) The method of claim 50, wherein  $\text{R}_2$  is methyl, q is 2 and the methyls are bonded at the 3 and 5 positions.

53. (New) The method of claim 45, wherein the compound administered is selected from the group consisting of:

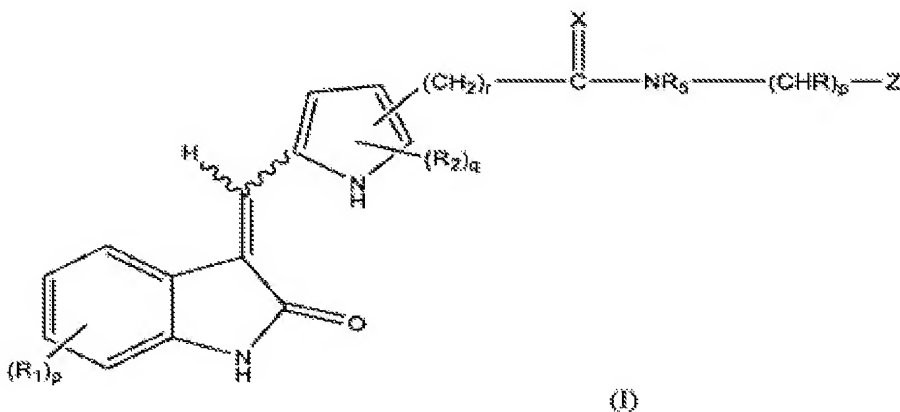


54. (New) The method of claim 45, wherein the compound of Formula I is selected from the group consisting of:





55. (New) A method for treating excessive osteolysis in a patient that is post-menopausal, comprising administering to said patient an effective amount of a compound of Formula I:



wherein

R is independently H, OH, alkyl, aryl, cycloalkyl, heteroaryl, alkoxy, heterocyclic and amino;  
 each  $R_1$  is independently selected from the group consisting of alkyl, halo, aryl, alkoxy, haloalkyl, haloalkoxy, cycloalkyl, heteroaryl, heterocyclic, hydroxy,  $-C(O)-R_8$ ,  $-NR_9R_{10}$ ,  $-NR_9C(O)-R_{12}$  and  $-C(O)NR_9R_{10}$ ;

each  $R_2$  is independently selected from the group consisting of alkyl, aryl, heteroaryl,  $-C(O)-R_8$  and  $SO_2R''$ , where  $R''$  is alkyl, aryl, heteroaryl,  $NR_9N_{10}$  or alkoxy;

each  $R_5$  is independently selected from the group consisting of hydrogen, alkyl, aryl, haloalkyl, cycloalkyl, heteroaryl, heterocyclic, hydroxy,  $-C(O)-R_8$  and  $(CHR)_rR_{11}$ ;

X is O or S;

p is 0-3;

q is 0-2;

r is 0-3;

$R_8$  is selected from the group consisting of  $-OH$ , alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

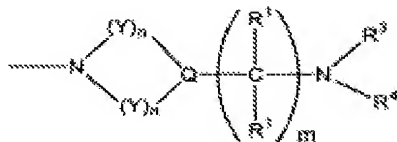
$R_9$  and  $R_{10}$  are independently selected from the group consisting of H, alkyl, aryl, aminoalkyl, heteroaryl, cycloalkyl and heterocyclic, or  $R_9$  and  $R_{10}$  together with N may form a ring, where the ring atoms are selected from the group consisting of C, N, O and S;

$R_{11}$  is selected from the group consisting of  $-OH$ , amino, monosubstituted amino, disubstituted amino, alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;  $R_{12}$  is selected from the group consisting of alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

$R_{12}$  is selected from the group consisting of alkyl, aryl, heteroaryl, alkoxy, cycloalkyl and heterocyclic;

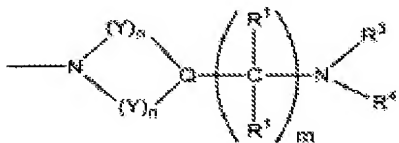
Z is OH, O-alkyl, or  $-NR_3R_4$ , where  $R_3$  and  $R_4$  are independently selected from the group consisting of hydrogen, alkyl, aryl, heteroaryl, cycloalkyl, and heterocyclic, or  $R_3$  and  $R_4$  may

combine with N to form a ring where the ring atoms are selected from the group consisting of CH<sub>2</sub>, N, O and S or



wherein Y is independently CH<sub>2</sub>, O, N or S,  
 Q is C or N;  
 n is independently 0-4; and  
 m is 0-3;  
 or a salt thereof.

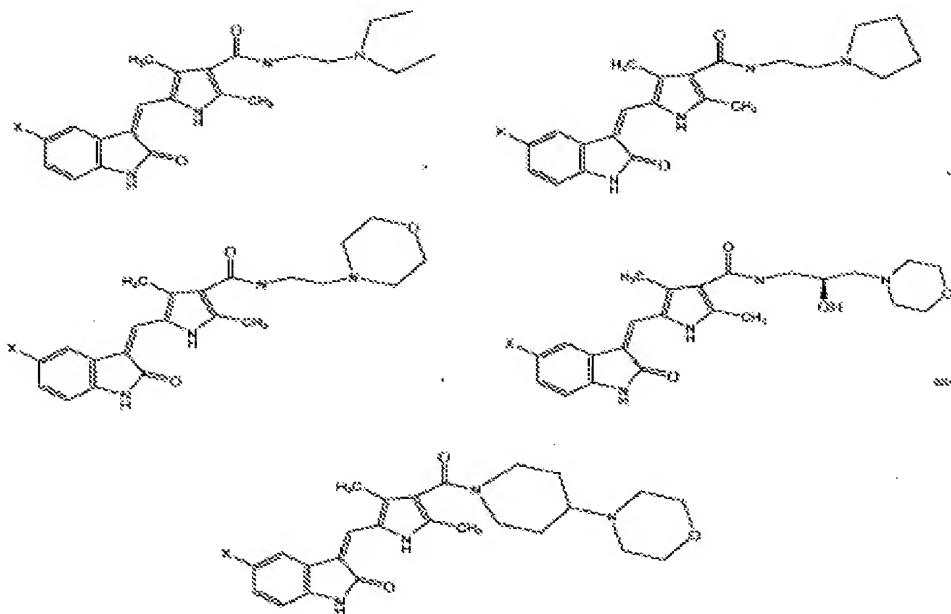
56. (New) The method of claim 55, wherein R<sub>1</sub> is halo and p is 1.
57. (New) The method of claim 56, where Z is -NR<sub>3</sub>R<sub>4</sub>, wherein R<sub>3</sub> and R<sub>4</sub> form a morpholine ring.
58. (New) The method of claim 55, wherein Z is:



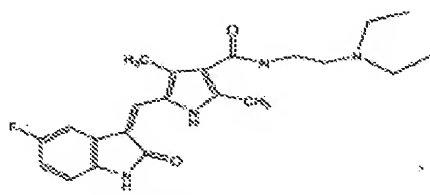
wherein each Y is CH<sub>2</sub>, each n is 2, m is 0 and R<sub>3</sub> and R<sub>4</sub> form a morpholine ring.

59. (New) The method of claim 55, wherein R<sub>2</sub> is methyl, q is 2 and the methyls are bonded at the 3 and 5 positions.
60. (New) The method of claim 55, where in r is 0.
61. (New) The method of claim 60, wherein R<sub>5</sub> is H.
62. (New) The method of claim 60, wherein R<sub>2</sub> is methyl, q is 2 and the methyls are bonded at the 3 and 5 positions.

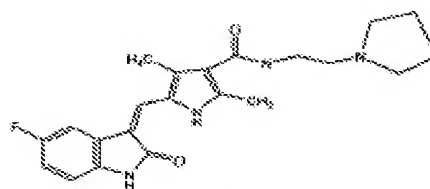
63. (New) The method of claim 55, wherein the compound administered is selected from the group consisting of:



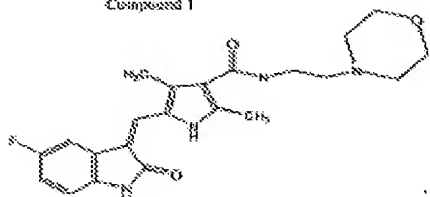
64. (New) The method of claim 55, wherein the compound of Formula I is selected from the group consisting of:



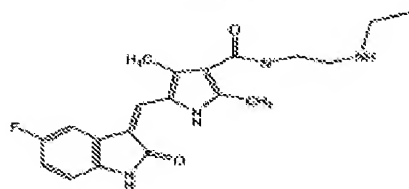
Compound 1



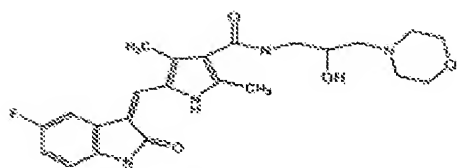
Compound 2



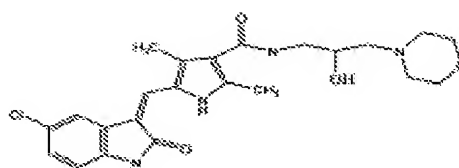
Compound 3



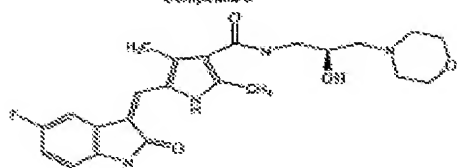
Compound 4



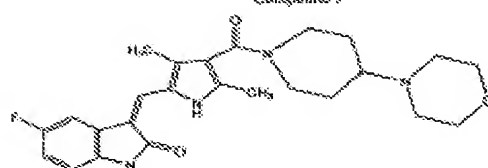
Compound 5



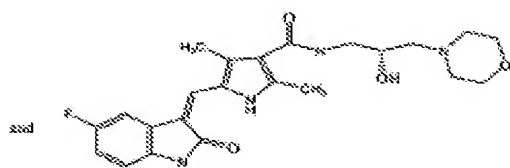
Compound 6



Compound 7



Compound 8



Compound 9

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